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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/542,949

07/21/2005

Toshiya Kudo

08295.0003-00000

9152

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09/11/2008

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EXAMINER

VERLEY, NICOLE T

ART UNIT

PAPER NUMBER

3616

MAIL DATE

DELIVERY MODE

09/11/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/542,949	<b>Applicant(s)</b> KUDO ET AL.	
	<b>Examiner</b> NICOLE VERLEY	<b>Art Unit</b> 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 8/11/08.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13, 19 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 19 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/18/07, 1/12/06</u> .                                       | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 - 4, 7, 9 - 12 and 19 - 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omura (US Patent Number 5,552,986) in view of Klingauf (US Patent Number 6,969,089).

Regarding claim 1, Figure 1A, 2 and 27 of Omura discloses a collision predicting unit programmed to predict a collision with an object of collision (13), first winding control unit (PT1) for controlling the winder so as to wind the seatbelt at a first winding load (F1) when a collision is predicted by the collision predicting means (Column 4, lines 28 – 35, 45-48), brake detecting unit to detect operation of a brake pedal (brake switch 116), second winding control unit (PT2) to control the winder so as to wind the seatbelt at a second winding load (F2) which is larger than the first winding load (F1) when the brake pedal operation is detected by the brake detecting unit, a winder release control unit to release the seatbelt to move freely responsive to detection of avoidance of collision (Column 6 lines 47-57, Column 7 lines 18 -23). Omura discloses it is known to use a brake switch which produces a signal connected to a control unit to detect brake pedal operation (Column 1 lines 21 - 54) and discloses PT2 operates in response to a second command signal from a control circuit. So would be obvious to use the signal from the brake switch to control the winding load in the seatbelt (Column 4, lines 52 –

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60). Also Mizutani discloses determination result by the collision prediction determination part is given results of pedal stroke sensor (Paragraph 36).

Regarding claims 2 and 9, Figure 1A, 2, 15 and 27, of Omura discloses means for predicting a collision with an object of collision (13); first winding control unit (PT1) for controlling the winder (regarding claim 9) or adapted (regarding claim 2) to wind the seatbelt from a moment when the collision is predicted by the collision predicting unit (13) while increasing the first (regarding claim 2) winding load (F1) of the seatbelt at a first rising gradient (Figure 15); brake detecting means (116) for detecting a brake pedal operation (Figure 27); and second winding control unit (PT2) for controlling the winder or adapted (regarding claim 2) to wind the seatbelt while increasing the second (regarding claim 2) winding load of the seatbelt at a second rising gradient which is larger than the first rising gradient from a moment when the brake pedal operation is detected by the brake detecting means (Figure 15) (Column 4, lines 28 – 35, 45 - 48, 52 – 60, Column 14, lines 25 - 37). Omura discloses it is known to use a brake switch which produces a signal connected to a control unit to detect brake pedal operation (Column 1 lines 21 - 54) and discloses PT2 operates in response to a second command signal from a control circuit. So would be obvious to use the signal from the brake switch to control the winding load in the seatbelt (Column 4, lines 52 – 60). Also Mizutani discloses determination result by the collision prediction determination part is given results of pedal stroke sensor (Paragraph 36). A winder release control unit to release the seatbelt to move freely responsive to detection of avoidance of collision (Column 6 lines 47-57, Column 7 lines 18 -23).

Regarding claims 7 and 12, Figure 1B of Omura discloses collision predicting unit (12) continuously detects a length (Lc) from the vehicle in question (M2) to the object of collision (M1), and predicts the collision with the object of collision based on the detected length (Lc) which varies with time (Column 5, lines 9 – 16, 65 – 67, Column 6, lines 1 – 2).

Regarding to claims 3 and 4, Figure 15 of Omura teaches first rising gradient (regarding claim 4) and second rising gradient (regarding claim 3) (Column 14, lines 25 – 37). However Omura does not explicitly disclose gradient values. Klingauf teaches that it is known to use various gradient values of force over time as set forth in Figure 13. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a value equal to or larger than 100N/180ms and smaller than 100N/100ms (regarding claim 4 and 11) and a value equal to or larger than 100N/100ms (regarding claim 3 and 10), since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omura as applied to claim 1 above, and further in view of Brambilla (US Publication Number 2001/0054816).

Omura teaches the first winding load (F2) (regarding claim 6) and the second winding load (F3) (regarding claim 5). It is noted that Omura does not disclose force values for F2 and F3. However, Brambilla discloses a first winding load (holding force) to a value between 80N and 120 N (claim 2) (regarding claim 6), a second winding load

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(pullback force) to a value equal to or larger than 150N (claim 2) (regarding claim 5).

Omura and Brambilla are analogous art because they are from the same field of endeavor for seatbelt apparatus with a winder. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a value between 80N and 120 N, as well as a value equal to or larger than 150N, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art.

Claims 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Omura as applied to claims 1 and 9 above, and further in view of Mizutani (US Publication Number 2004/0122573).

Omura teaches emergency break detecting unit (16 and 17). It is noted that Omura does not disclose how the emergency brake detecting unit detects the emergency braking state. However Mizutani discloses the emergency brake detecting unit (100) detects the brake pedal operation based on at least any one of a pressing amount, a pressing speed, and pressing force of the brake pedal and a brake hydraulic pressure (page 3, paragraph 36). Omura and Mizutani are analogous art because they are from the same field of endeavor for seatbelt apparatus with a winder. At the time of invention, it would have been obvious to a person of ordinary skill in the art to use the Mizutani emergency braking detecting criteria for the Omura emergency brake detecting means. The motivation would have been to have a vehicle safety apparatus which prevents the actuation of the safety apparatus from being excessive in the case where an increase of the amount of brake operation is low. Furthermore, in the case of the

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increase being high, the actuation is controlled so as to fully bring out the performance of the safety apparatus (abstract).

Regarding claims 19 and 20 Omura discloses the collision avoidance detecting unit releases control of the winder based on at least one of detecting steering operation by a vehicle driver, detecting stopping of the vehicle, and detecting passage of a period of time since operation of the first or second winding control units greater than a preset period of time. The collision avoidance detecting unit releases control of the winder based on at least one of detecting steering operation by a vehicle driver, detecting stopping of the vehicle, and detecting passage of a period of time since operation of the first or second winding control units greater than a preset period of time (Column 6 lines 36-57).

### ***Response to Arguments***

Applicant's arguments filed July 15, 2008 have been fully considered but they are not persuasive. Applicant argues that Omura does not disclose or suggest that the seatbelt is released to move freely responsive to detection of avoidance of the collision, the examiner disagrees and the applicant is directed to Column 6 line 47-57 and Column 7 lines 18-23, which states the second preloader is designed to retract a small predetermined length of the seatbelt from the second restraining position, when vehicle does not come into collision after the first preloader operates, the direction of the motor is reversed to returned to its initial position . As a result the seatbelt is to the first or normal occupant restraining position.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICOLE VERLEY whose telephone number is (571)270-3542. The examiner can normally be reached on 8:00 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley Morris can be reached on (571) 272-6651. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/N. V./  
Examiner, Art Unit 3616

/Paul N. Dickson/  
Acting SPE of Art Unit 3616